Lead Poisoning Questions

Lead in People

How do children get lead poisoning?
By inhaling or swallowing microscopic amounts of lead dust. This is more common than the stereotype of a child eating a highly toxic paint chip. Lead dust can come from deteriorating lead paint or lead-contaminated soil.

How can I tell if my child has lead poisoning?
A blood test is the only way to know. Children are most vulnerable in the womb through the age of six (6) because their developing bodies absorb lead easier and are more susceptible to damage. State health officials recommend having an annual test through the age of three (3) because that's when lead levels generally peak. Any child ages four (4) through six (6) who hasn't been checked should be. Also, high-risk children ages four through six should be tested annually. Annual tests are necessary because lead poisoning can occur at any time.

What children are considered at high risk?
Children who live or spend a lot of time in homes built before 1950; children in pre-1978 homes that are being renovated or repainted; children who have a friend or sibling with lead poisoning; or children whose yards are highly contaminated. Minority children are disproportionately affected.

What can lead poisoning do to my child?
Prenatal exposure can lead to premature birth or smaller babies. Lead can damage the nervous system, interfere with growth, lessen intelligence, harm hearing or affect behavior; possibly making the child more excitable and less able to concentrate. In extreme cases, it can lead to coma and death.

How about adults?
Lead can cause reproductive problems in men and women; high blood pressure, kidney and digestive problems, nerve disorders, memory and concentration problems, and muscle or joint pain.

Lead in the House

Water

Water leaves the purification plant without lead in it, but by the time you turn on your tap, dangerous amounts may have accumulated. This is because water may dissolve lead that is present in brass or bronze faucets and fittings, lead pipes or lead solder. Two factors influence the extent of this problem: your water's characteristics (many utilities treat water to minimize the presence of lead) and the age of your fixtures. Older fixtures can develop a protective coating from deposits in the water. Since water in the midlands is hard, lead is less of a problem here, but individual homes may have a problem.

If you haven't used your water for several hours, run your tap water until it turns cold before using it for cooking or drinking. Some health officials recommend fifteen (15) to thirty (30) seconds, others recommend two (2) to five (5) minutes. Don't use hot tap water for cooking or drinking because it dissolves lead more readily.

Never feed children formula or juices made from the first stream of water out of your faucet in the morning or from water that has sat in pipes for hours. Boiling water will not eliminate lead.

Food

Lead can be present in storage containers made from poorly glazed pottery, imported cans with lead seams, antique pewter, some imported pottery, porcelain and leaded glass. Don't store food, especially acidic food, for long periods in any of these. Lead dust on counters, dishes and hands also can contaminate food; so it is important to clean surfaces and hands before cooking or eating. Good nutrition reduces the body's absorption of lead. Feed your child a diet high in iron and calcium, such as spinach, fortified cereal, peanuts, milk, yogurt and cheese.

Other sources of lead around the house include:

- Old bathtubs
- Lead wicks in candles (wicks with metal in middle may contain lead)
- Fishing weights
- Hobbies such as stained glass making or target practice.
- Jobs such as construction, demolition, painting, battery work, or radiator repair can expose a person to lead, which can be brought home on clothing.
- Drapery and window weights
- Folk remedies such as "greta" and "azarcon."
- Brass keys
- Battery casings
- Old toys or furniture may be painted with lead paint.
- Some imported plastic mini-blinds.

Lead Paint

Lead paint, which was prized for its durability, was used in high traffic and high moisture areas until it was banned for residential use in 1978. Before about 1940, often ten (10) percent, to as much as fifty (50) percent of a can of paint was lead. By the 1950's, manufacturers had begun decreasing the amount of lead in paint. If your paint has an alligator-cracking pattern or rubs off in your hands in a chalky fashion, it probably contains lead. Unless testing proves the absence of lead, health officials recommend people assume that painted surfaces in homes built before 1978 may contain some lead. Removing lead paint can create more problems than leaving it intact. Lead paint that's in good shape generally should not be removed. Lead paint that is chipping, peeling and cracking needs to be addressed. Even if your lead-painted windows or doors aren't chipping, you could have a problem. The friction from opening and shutting a door or window produces lead dust.

If you are going to remove lead paint, learn how to do so safely. Do not use a belt-sander, propane torch, heat gun, dry scraper or dry sandpaper to remove lead-based paint. These tools create large amounts of lead dust and fumes, which can remain in your home for a long time. Even if you do not have children, sandblasting or pressure washing the outside of your home may harm your neighbor's children.

To remove paint
Educate yourself about safe practices. Wet down the paint before you scrape or sand it. A power sander should have a hood to trap dust and a HEPA vacuum attachment. Cover ground or floors with drop clothes that can be discarded. Temporarily move children, pregnant women and pets out of a home during renovation or paint removal. Clean the area with soap and water before allowing them back. If you can't move them out, seal off the work area.

Places where lead paint is likely to be found include:

- Porches
- Windows
- Railing
- Stairs
- Some older furniture and toys
- Baseboards
- Trim
- Columns
- Exterior house paint

Cleaning House Where Lead is a Problem

Wet-mop your floors, window sills, steps, grates, registers, baseboards and other hard surfaces weekly. Thoroughly rinse mops or sponges when you are done. Discard dirty water down the toilet or a floor drain- do not pour in your yard. Put washable door mats at all entries of your home and wash them weekly. Have people remove their shoes before coming indoors. Consider replacing carpeting with non-porous flooring such as tile or wood, so it's easier to clean and it traps less lead dust.

Wash clothes contaminated with lead separately from others. Be sure your child washes their hands often, especially before eating or nap time. Wash toys and pacifiers often. When washing clothes, mats or wiping down your house; use an all-purpose cleaner. If you vacuum, use a HEPA filter so you don't throw lead dust into the air. The Lead Safe Omaha Coalition provides loaner and free vacuums for households where children have lead poisoning.

Lead in the Yard

Sources of lead paint
The soil around a house, garage, fence, outbuilding or former building site could be highly contaminated by deteriorated lead paint. If the home has been sandblasted or pressure washed, the contamination could extend further out.

Lead-based insecticides
Industrial air pollution. This is believed to be the aggravating problem in Omaha. Automotive exhaust. Gasoline no longer contains lead, but soil along roadways and driveways could have been contaminated from automotive exhaust when leaded gasoline was used. If a shade-tree mechanic repaired cars in your yard, the area where he worked could be highly contaminated.

If your yard is contaminated
The easiest and cheapest thing to do is to cover bare dirt. Exposed soil is a greater hazard than grassy or covered soil, and it's more serious if it's in an area where children play. For example, the federal standard for bare soil where children play is 400 parts lead per million soil; compared to 1,200 parts per million if children don't play there. Fence off the soil until you can get it covered.

To cover soil
Mix-in compost to dilute the lead concentration in soil. Lay down fresh sod or seed yard. Cover with six (6) inches of lead and arsenic-free wood chips, mulch, new soil or sand. Lay newspaper, black plastic or black cloth underneath the mulch. Pave over bare areas. Or, install a deck, then block off the area underneath, perhaps, with latticework. Plant bushes around your home to keep pets and children away from the foundation. Mulch under shrubs. Pets can bring lead dust indoors too, so inspect their play area for bare spots.

What about gardening?
Test soil before gardening next to a building built before 1978 or along a roadway or driveway. Depending upon the level of contamination, you may need to restrict the type of produce grown, or bring in fresh soil to do raised-bed gardening. Although some produce can absorb lead from the soil, the bigger hazard is microscopic amounts of lead clinging to the exterior of the plant and lead exposure from working in contaminated soil. Discard outer leaves of leafy plants. Thoroughly wash all vegetables with soapy water, or use a one (1) percent vinegar solution (1 to 2 ounces of vinegar to 1 gallon of water). To reduce the amount of lead plants absorb, maintain soil pH above 6.5, keep phosphorus levels high and add organic matter.

What can I do?
Have your child tested. If your child is at risk, have them tested annually through the age of six (6). Locate any lead risks in your home or day-care and educate yourself about lead. Practice aggressive, safe housekeeping and yard maintenance. Feed your child a balanced diet, stimulate his intellectual development.

For Blood Tests- see your doctor

Medicaid pays for lead tests; most insurance plans do too. Qualifying individuals living in Douglas County may be eligible for a free blood test by contacting the Douglas County Health Department at (402) 444-7825.

For Soil Tests

Contact
For a list of licensed lead entities, visit the Nebraska Department of Health & Human Services, Lead-Based Paint Program, click on Lead-Based Paint Business Entities to access a list of lead abatement contractors (who clean-up lead based paint); and consultants (who test for lead in paint and soil).

- The University of Nebraska Soil and Plant Laboratory at (402) 472-1571.
- The Douglas County Health Department does some free soil and paint tests, but restrictions apply. Call (402) 444-7825 for more information.

Miscellaneous Lead Facts

- In children, up to forty (40) percent of lead circulates through tissue and organs, where it does damage.
- Research indicates that a little over six millionths of a gram of lead a day is sufficient for a child's body to begin stockpiling lead (a gram equals about 1/28 of an ounce). Based on research done on yards in New Orleans; children playing in contaminated yards (in East Omaha) could be coming indoors with ten (10) times that amount on their hands.
- Based on tests done thus far, most yards in East Omaha will not require clean-up, however, the EPA calculates that at least five (5) in one-hundred (100) children playing in contaminated yards are likely to ingest harmful amounts of lead.
- Most children do not have lead poisoning, but lead is so prevalent that all children should be considered at risk.
- Nationally, an estimated 434,000 children have elevated levels of lead in their blood, about 2.2 percent of children ages 5 and younger.
- Lead is a naturally occurring bluish-gray metal. It is odorless and tasteless. It can be found throughout our environment and is common in soil, but not the levels that exist in many East Omaha yards.
- Most of the 250,000 homes built in Nebraska before 1950 are likely to contain lead paint.

Additional Contacts

Douglas County Health Department (402) 444-7825
Lincoln-Lancaster County Health Department (402) 441-8000
Lead-Safe Omaha Coalition (402) 451-3730
Iowa Department of Public Health Lead Program Toll Free 800-972-2026
Environmental Protection Agency Toll Free 800-424-5323

For More Information

Please refer to the Lead-Based Paint Program's Index Page, http://www.dhhs.ne.gov/puh/enh/LeadPaint/leadindex.htm, or contact us using the information provided below:

Nebraska Department of Health & Human Services
Division of Public Health, Environmental Health Unit
Office of Environmental Health Hazards & Indoor Air
Asbestos/Lead-Based Paint Program
P.O. Box 95026, 301 Centennial Mall South- 3rd Floor
Lincoln, Nebraska 68509-5026
Phone: (402) 471-0386 Fax: (402) 471-8833
Toll Free: 888-242-1100, Extension 1 (Nebraska only)
E-mail: DHHS.HealthHazardsIndoorAir@nebraska.gov

Sources: U.S. Environmental Protection Agency, U.S. Housing and Urban Development Department, Agency for Toxic Substances and Disease Registry, Douglas County Health Department, University of Nebraska-Extension Office, Lead Safe Omaha Coalition, Xavier University of Louisiana, Nebraska Health and Human Services Department, Alliance to End Childhood Lead Poisoning; prepared by Omaha World-Herald Staff Writer Nancy Gaarder, May 27, 2003.